



UNITED STATES PATENT AND TRADEMARK OFFICE

65

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,994	01/31/2001	Masashi Morizane	P107336-00016	8286

7590 01/09/2004

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
1050 Connecticut Avenue, N.W., Suite 400
Washington, DC 20036-5339

EXAMINER

MUTSCHLER, BRIAN L

ART UNIT PAPER NUMBER

1753

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,994

Applicant(s)

MORIZANE ET AL.

Examiner

Brian L. Mutschler

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-7 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9 and 11 is/are rejected.
- 7) ☒ Claim(s) 5 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Comments

1. The finality of the prior Office action is withdrawn in view of the newly discovered reference(s) to JP 60-164348. Rejections based on the newly cited reference(s) follow.
2. The rejections of claims 1-3, 7, and 9 under 35 U.S.C. 103 over Iino et al. (U.S. Pat. No. 6,407,329) has been overcome by Applicant's submission of the translated priority documents.
3. The rejection of claim 11 under 35 U.S.C. § 103 over Yamagishi et al. (U.S. Pat. No. 6,300,556) in view of Otani et al. (US 2001/0009160 A1) has been withdrawn because the Otani et al. reference is not valid prior art based on the U.S. filing date.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-164348 A, herein referred to as JP '348, in view of Kataoka et al. (U.S. Pat. No. 6,307,145) and in view of Yamagishi et al. (U.S. Pat. No. 6,300,556).

Regarding claims 1 and 11, JP '348 discloses a solar cell module having a plurality of solar cell elements **6** sealed within a sealing resin **7** between a light transmitting member **5** on the front surface side and a rear surface resin film **4** (figs. 1

and 2). A water transmission preventing layer (glassy moisture-proof film) **1** is formed between the light transmitting member **5** and the rear surface resin film (weather-resisting film) **4** (figs. 1 and 2; English abstract).

Regarding claim 2, the rear surface resin film **4** is comprised of a group of resins including transparent resins (page 3, col. 3).

Regarding claims 3, 9, and 11, the water transmission preventing layer **1** is a glassy moisture-proof film, i.e., the water transmission has a water vapor transmission rate substantially equal to zero. The sealing resin **7** comprises EVA (see page 2, col. 2), which has a water vapor transmission rate greater than zero.

Regarding claim 7, the water vapor transmission layer **1** is formed so as to cover the interval part between the solar cell elements (fig. 1).

The solar cell module disclosed by JP '348 differs from the instant invention because JP '348 does not teach that the light transmitting member on the front side contains at least sodium, as recited in claims 1 and 11. The light transmitting member **5** is disclosed as an "upper transparent material" in the English abstract of JP '348.

Kataoka et al. teach, "Since glass has excellent weather resistance and is impervious to moisture, it can be said to be one of the most excellent materials for the member for covering the photovoltaic device of semiconductor" (col. 1, lines 43-54).

Yamagishi et al. show a solar cell module that has a sodium-containing light transmitting member **1**, a rear surface resin film **8** and a plurality of solar cell elements sealed with sealing resin **9** between the front member **1** and the rear surface member **8** (col. 3, line 18; col. 4, line 14; fig. 1). The light transmitting member **1** is made of soda

lime glass, which is an inexpensive glass commonly used in solar cell modules (col. 7, line 29).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the light transmitting member of JP '348 to use soda lime glass as taught by Yamagishi et al. because soda lime glass is an inexpensive glass often used in solar cell modules, and because Kataoka et al. teach that glass is an excellent material for covering photovoltaic devices because of its weather resistance.

Response to Arguments

6. Applicant's arguments with respect to claims 1-3, 7, 9 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

7. Claims 5 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 5 and 10 are distinguished over the prior art of record because the prior art does not teach or suggest the use of a glass water transmission preventing layer bonded on a surface of the rear surface resin film. Dran et al. (U.S. Pat. No. 4,321,418) teach the use of a glass water transmission preventing layer and a resin film, but the glass layer is positioned outside of the resin film. JP '348 teach the use of a glassy moisture-proof film made of silicon oxide

thickness = 0.00002 to 0.0001 mm), but the film is not bonded directly to the surface of the rear surface resin film.

8. Claim 6 is distinguished over the prior art of record, which does not teach or suggest the use of a water transmission prevention layer in a solar cell module that is formed on the same plane as the solar cell modules, i.e., the water transmission prevention layer is coplanar with the solar cells within the module and within the sealing resin.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Mutschler whose telephone number is (571) 272-1341. The examiner can normally be reached on Monday-Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

blm
December 31, 2003


EDNA WONG
PRIMARY EXAMINER
TC1700